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## Keyboard Operator's Guide



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### **Federal Communications Commission (FCC) Statement**

**Note:** This keyboard has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This keyboard generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult an IBM authorized dealer or service representative.

Properly shielded and grounded cables and connectors must be used in order to meet FCC limits. Proper cables and connectors are available from authorized dealers. The seller is not responsible for any radio or television interference caused by using other than recommended cables and connectors or by unauthorized changes or modifications to this equipment. Unauthorized changes or modifications could void the user's authority to operate the equipment.

### **Canadian Department of Communications Compliance Statement**

This equipment does not exceed Class B limits per radio noise emissions for digital apparatus, set out in the Radio Interference Regulation of the Canadian Department of Communications.

Cet équipement ne dépasse pas les limites de Classe B d'émission de bruits radioélectriques pour les appareils numériques, telles que prescrites par le Règlement sur le brouillage radioélectrique établi par le ministère des Communications du Canada.

### **Safety Information**

The power source to the keyboard should be fused, 5 amps or less.

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## **WELCOME!**

Thank you for choosing an IBM® keyboard. Your keyboard is designed to provide you a high quality, reliable, comfortable interface to your computer.

This manual shows you how to connect the keyboard to your computer. It also provides instructions for installing the mouse driver needed to operate the 25mm Trackball, if required. If you don't already have a mouse driver installed, or if the Trackball doesn't work with your current mouse driver, you should install the mouse driver from the diskette provided with the keyboard. The manual also shows you how to use the keyboard with the Trackball.

The manual contains information about caring for your keyboard and the appropriate government regulatory statements.

We hope you enjoy using your IBM Keyboard. If you have any questions about your keyboard which are not answered by the information in this manual, please call IBM directly at 1-800-772-2227.

## HOW TO INSTALL YOUR KEYBOARD

### Enhanced Keyboard

1. Be sure the electrical power to your computer system is **Off**.
2. Your new keyboard includes a cable. Plug the cable into your keyboard (See Figure 1).

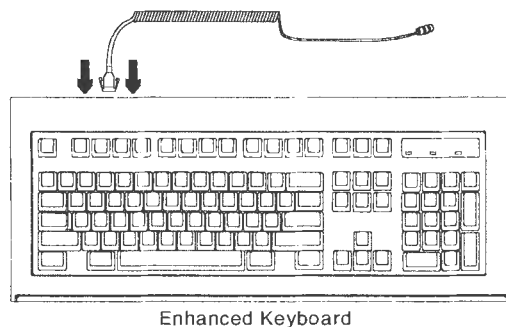


Figure 1.

3. Unplug the old keyboard from your computer.
4. Plug the new keyboard into the computer keyboard port. If you have difficulty locating the port, refer to your computer manual.
5. Turn the computer **On**. Should a keyboard error appear on the display, turn the computer **Off** and recheck connectors to assure good connection. If the error reappears, call 1-800-772-2227. (Consult your computer manual to identify keyboard error code.)

### Enhanced keyboard with PS/2® trackball

1. Be sure the electrical power to your computer system is **Off**.
2. Your new keyboard includes a cable. Plug the cable into your keyboard (See Figure 2).

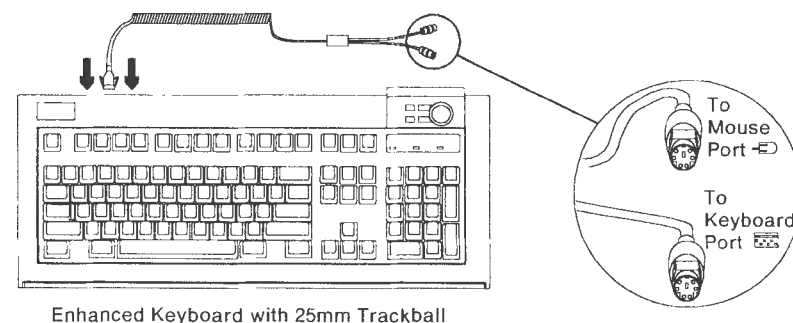




Figure 2.

3. Unplug your old keyboard from your computer.
4. Referring to inset of Figure 2, plug the new keyboard connector (icon ) into the computer keyboard port. If you have difficulty locating the port, refer to your computer manual.
5. If you have a mouse plugged into the mouse port, unplug the mouse.
6. Referring to inset of Figure 2, plug the trackball connector (icon ) into the mouse port. If you have difficulty locating the mouse port, refer to your computer manual.

7. Turn your computer **On**. Should a keyboard error appear on the display, turn the computer **Off** and recheck connectors to assure good connection. If the error reappears, call 1-800-772-2227. (Consult your computer manual to identify keyboard error code.)
8. A diskette with information on how to operate the trackball and a device driver is supplied with the keyboard. A mouse driver is needed for the trackball to function. If you don't already have a mouse driver installed, or the trackball doesn't work with your current mouse driver, then you should install the mouse driver that is on the diskette.

**Note:** The mouse driver provided on the diskette is not compatible with OS/2®. However, OS/2 comes with its own mouse driver(s).

To install the new mouse driver:

- Turn the computer **On** and go to the DOS prompt.
  - Insert the diskette into drive A.
  - Type
 

```
A:      <enter>
INSTALL <enter>
```
  - Follow the instructions on the display.
9. The mouse driver that came with your new keyboard has some adjustable features. You can learn about them by reading the file "Settings" which is on the diskette. To print this file on your PC printer:
    - Turn your printer **On** and go to the DOS prompt.
    - Type
 

```
A:      <enter>
PRINT SETTINGS <enter>
```
- If the PRINT command does not work, consult your Operating System Manual.

## Enhanced keyboard with Serial Trackball

1. Be sure the electrical power to your computer system is **OFF**.
2. Your new keyboard includes a cable. Plug the cable into your keyboard (See Figure 3).

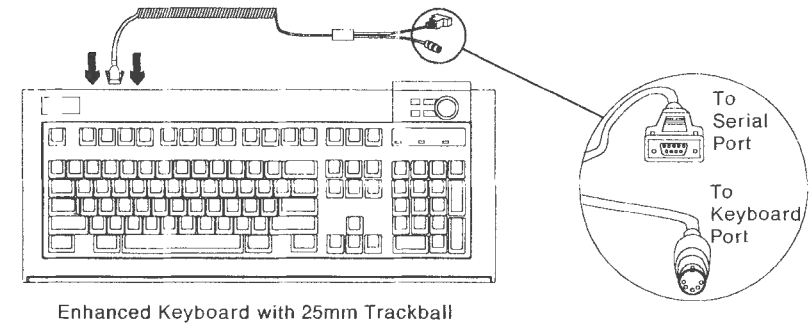
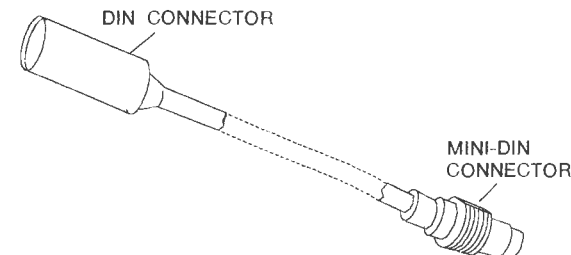


Figure 3.

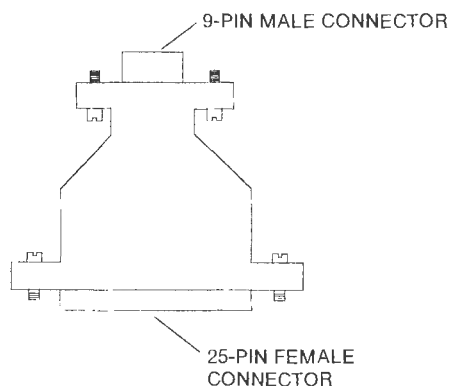
3. Unplug your old keyboard from your computer.
4. Referring to inset of Figure 3, plug the new keyboard connector (DIN connector) into the computer keyboard port. If your computer requires a MINI-DIN connector you will need to obtain a DIN to MINI-DIN adapter (See Figure 4) from a commercial source. If you have difficulty locating the port, refer to your computer manual.



TYPICAL DIN TO MINI-DIN CONNECTOR

Figure 4.

5. If you have a mouse plugged into the mouse port, unplug the mouse.
6. Referring to inset of Figure 3 on page 5, plug the trackball connector (9-pin connector) into the serial port. If your computer requires a 25-pin connector you will need to obtain a 9-pin male to 25-pin female adapter (see Figure 5) from a commercial source. If you have difficulty locating the serial port, refer to your computer manual.



TYPICAL 9-PIN MALE TO 25-PIN FEMALE ADAPTER

Figure 5.

7. Turn your computer **ON**. Should a keyboard error appear on the display, turn the computer **OFF** and recheck connectors to assure good connection. If the error reappears, call 1-800-772-2227. (Consult your computer manual to identify keyboard error code.)
8. A diskette with information on how to operate the trackball and a device driver is supplied with the keyboard. A mouse driver is needed for the trackball to function. If you don't already have a mouse driver installed, or the trackball doesn't work with your current mouse driver, then you should install the mouse driver that is on the diskette.

**Note:** The mouse driver provided on the diskette is not compatible with OS/2. However, OS/2 comes with its own mouse driver(s).

To install the new mouse driver:

- Turn the computer **On** and go to the DOS prompt.
- Insert the diskette into drive A.
- Type
 

```
A:          <enter>
INSTALL    <enter>
```
- Follow the instructions on the display.

9. The mouse driver that came with your new keyboard has some adjustable features. You can learn about them by reading the file "Settings" which is on the diskette. To print this file on your PC printer:

- Turn your printer **On** and go to the DOS prompt.
- Type
 

```
A:          <enter>
PRINT SETTINGS  <enter>
```

If the PRINT command does not work, consult your Operating System Manual.

**Note:** The keyboard must be connected for the serial trackball to function.

## USING THE TRACKBALL ON YOUR KEYBOARD

1. The trackball shown in Figure 6 is used to position the pointer on the display and take actions by using the accompanying buttons.

a. To select items:

- Rotate the ball to position the pointer on the object.
- Press and quickly release the mouse button to select the object.

b. To select and move an object on the screen:

- Rotate the ball to position the pointer on the object.
- Press and release the lock button to select and lock the pointer to the object.
- Rotate the ball to reposition the object.
- Release the object by pressing either the lock button or the mouse button.

The object may also be moved by holding down the mouse button while rotating the ball instead of using the lock button.

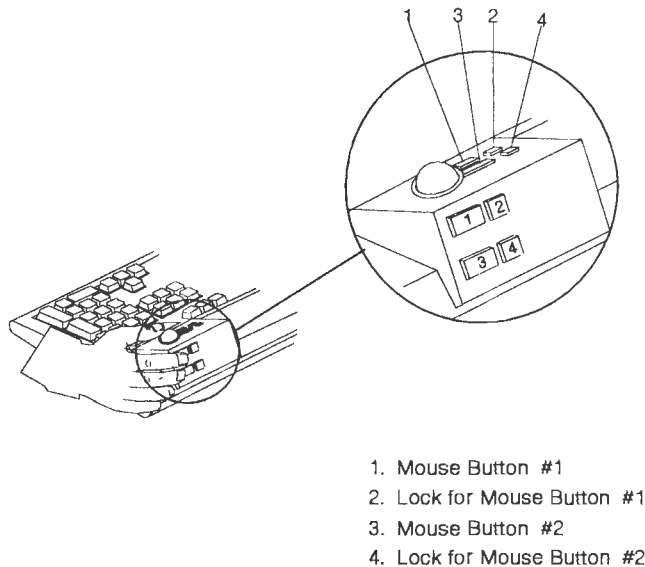


Figure 6.

## CARE OF YOUR KEYBOARD

1. Your keyboard can be cleaned with a soft cloth moistened with water and mild soap. Being an electronic product, the keyboard should not be immersed in liquid or dropped.
2. If you have a trackball on the keyboard, it may also be cleaned with a soft damp cloth. Rotate the ball with one hand while cleaning it with the other. Should the ball need to be removed for more thorough cleaning, follow these steps:
  - a. Using a small pointed device approximately the size of the end of a paper clip, turn the retaining ring counterclockwise. (The retaining ring encircles the ball.)
  - b. Remove the ring and the ball with your fingertips or by tipping the keyboard. Do not stick objects into the ball socket.
  - c. Clean ball with mild soap and soft damp cloth. Clean the two rollers in the mechanism with a moist cotton swab by wiping parallel to the shafts. Rotate the roller with the swab and continue wiping. Continue this process until each roller has been completely rotated and cleaned. Do not try to remove any part of the mechanism.
  - d. Re-install ball and ring making sure that the ring has been rotated firmly clockwise. Check the rotation of the ball. If the ball does not rotate, remove the ring, check the ball and rollers, and re-install the ring.

**Note:** The ball may bind if the ring has not been fully rotated clockwise.

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**Machine:** IBM Keyboard Option  
**Warranty Period\*:** One Year

*\*Elements and accessories are warranted for three months.  
Contact your place of purchase for warranty service information.*

## Production Status

Each machine is manufactured from new parts, or new and serviceable used parts (which perform like new parts). In some cases, the Machine may not be new and may have been previously installed. Regardless of the Machine's production status, IBM's warranty terms apply.

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IBM warrants that each Machine 1) is free from defects in materials and workmanship and 2) conforms to IBM's Official Published Specifications. IBM calculates the expiration of the warranty period from the Machine's Date of Installation. The date on your receipt is the Date of Installation, unless IBM or your reseller informs you otherwise.

During the warranty period, IBM or your reseller will provide warranty service under the type of service designated for the Machine and will manage and install engineering changes that apply to the Machine. IBM or your reseller will specify the type of service.

For a feature, conversion, or upgrade, IBM or your reseller may require that the Machine on which it is installed be 1) the designated, serial-numbered Machine and 2) at an engineering-change level compatible with the feature, conversion, or upgrade. Some of these transactions (called "Net-Priced" transactions) may include additional parts and associated replacement parts that are provided on an exchange basis. All removed parts become the property of IBM and must be returned to IBM.

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If a Machine does not function as warranted during the warranty period, IBM or your reseller will repair or replace it without charge. If IBM or your reseller is unable to do so, you may return it to your place of purchase and your money will be refunded.

If you transfer a Machine to another user, warranty service is available to that user for the remainder of the warranty period. You should give your proof of purchase and this Statement to that user.

## Warranty Service

To obtain warranty service for the Machine, you should contact your reseller or call IBM. In the United States, call IBM at 1-800-IBM-SERV (426-7378). In Canada, call IBM at 1-800-465-6666. You may be required to present proof of purchase.

Depending on the Machine, the service may be 1) a "Repair" service at your location (called "On-site") or at one of IBM's or a reseller's service locations (called "Carry-in") or 2) an "Exchange" service, either On-site or Carry-in.

When a type of service involves the exchange of a Machine or part, the item IBM or your reseller replaces becomes its property and the replacement becomes yours. The replacement may not be new, but will be in good working order.

It is your responsibility to:

1. obtain authorization from the owner (for example, your lessor) to have IBM or your reseller service a Machine that you do not own;



2. Where applicable, before service is provided -

- a. follow the problem determination, problem analysis, and service request procedures that IBM or your reseller provide,
  - b. secure all programs, data, and funds contained in a Machine,
  - c. inform IBM or your reseller of changes in a Machine's location, and
  - d. for a Machine with exchange service, remove all features, parts, options, alterations, and attachments not under warranty service. Also, the Machine must be free of any legal obligations or restrictions that prevent its exchange; and
3. be responsible for loss of, or damage to, a Machine in transit when you are responsible for the transportation charges.

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If for any reason you are not satisfied with this product, return it to the place-of-purchase within 30 days for a full refund. A valid proof-of-purchase is also required.

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